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ABSTRACT

Ethical behavior, particularly among young people, is of increasing concern to various segments of society. Before this or any behavior can be influenced, an understanding is needed of the factors that shape it, including social influences, cognitive and emotional factors, and attitudes. The purpose of this study was to examine students' knowledge and opinions about online behavior and to ascertain whether their views differed from those of the adults around them. Specifically, the study was designed to assess students' and educators' intuitive understanding of ethics and ethical decision-making, their ability to apply that knowledge to cyber dilemmas, their understanding of how to teach and learn an ethical awareness, and their sensitivity to the social context of cyberethics issues. Three areas were explored. First, what are the unique characteristics of ethics in cyberspace-what are the dilemmas, and how are ethics defined in cyberspace? Second, what is known about moral development in general, and how does it transfer into cyberspace? Finally, what is the social context of online behavior, and how does it impact ethical behavior? Four major themes were identified across all of the five focus groups studied: (1) the cyberethics "authority" recognized by students is much younger than the offline ethical authority; (2) students of different ages use different mental frameworks to decide ethical online behavior; (3) when considering "appropriate" and "inappropriate" behavior online, some issues are clear for both teachers and students, however many other are not; and (4) educators can encourage ethical behavior by recognizing the type of situations that make unethical behavior attractive and challenging to students to channel their technological expertise in positive directions. (Contains 15 references.) (Author/AEF)

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Defining the Limits: CyberEthics

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Abstract

How should people behave when using the computer? How did you learn "right" and "wrong" in cyberspace? We surveyed teachers and students to understand how each group views ethical online behavior. Our research indicates that while students and teachers share some insights, they do not share the same viewpoints on all cyberethics issues. This discussion will address the need for a common forum and interactive ways for sharing ideas on cyberethics issues to develop a student's ethical decision-making abilities.

Introduction

Ethical behavior online, particularly among young people, is of increasing concern to various segments of our society. Before we can influence this or any behavior, we need to understand the factors that shape it, including social influences, cognitive and emotional factors and attitudes. The purpose of this study was to study students' knowledge and opinions about online behavior and to ascertain whether their views differed from those of the adults around them. In order to provide an appropriate context for these questions, three areas need to be explored. First, what are the unique characteristics of ethics in cyberspace – what are the dilemmas, and how do we define ethics in cyberspace? Second, what do we know about moral development in general, and how does it transfer into cyberspace? Finally, what is the social context of online behavior, and how does it impact ethical behavior?

Issue I: Ethics and Cyberspace

Ethical Dilemmas in Cyberspace: Students often test the social limits of what is considered acceptable behavior, both online and in the real world. While it is the major transgressions that create headlines, routine decisions that have ethical implications are made every day by students of all ages. Often these decisions are made without careful consideration of these implications for individual students or for our society.

Three key types of issues have emerged: intellectual property, privacy/security and free speech/hate speech. Intellectual property issues include plagiarism, Internet file sharing programs like Napster, and software pirating. Privacy and security issues range from hacking to surveillance software such as the FBI's Carnivore and unauthorized cookies deposited from websites. Freedom of speech issues can be seen in the discussion of online censorship, cyberporn and cyberhate. All three types of issues host multiple opportunities for ethical decision making. Indeed these same issues are the subject of several contemporary works by lawyers, philosophers and computer scientists. (Hamelink, 2001; Lessig, 1999; Ludlow, 1996; Sykes, 1999)

Definitions of "Ethical" in Cyberspace: Regardless of the particular issue under discussion, both students and teachers question when it is appropriate to transfer our understanding of ethical behavior from the classroom to the online environment. However, students and educators do not necessarily share the same viewpoints on cyberethics issues, nor do they bring the same skill sets to the ethical decision making process. Most notably, while students often are more experienced in using online technology, teachers are more familiar with the process of ethical decision-making. Finally, there are many situations that do not have clearly defined social boundaries. When is it okay to download and use a picture? Is a web site with negative comments about fellow students an example of free speech or slander? Is bypassing the security of a system for a good cause heroic or unethical?

Issue II: Moral Development and Moral Education

Although little research on moral behavior in cyberspace has been conducted, we do have an idea of how students develop moral behavior generally. James Rest (1983) identified four major processes that contribute to moral behavior: moral sensitivity, moral judgment, moral motivation and moral character. Moral sensitivity relates to an individual's ability to recognize the moral dimensions of a situation. Moral judgement, which has been studied extensively by Kohlberg and Turiel, involves the ability to decide which course of action is more morally sound. Moral motivation recognizes the level of importance the individual places on acting morally, and moral character assesses the individual's ability to persist in a moral course of action even in the face of difficulties. According to Rest, all four processes interact to determine the observed final behavior. Research so far suggests that moral sensitivity (Bebeau, 1994) and moral judgement (Schlaefli, Rest & Thoma, 1985) can be enhanced by educational programs. Moral motivation and moral character have not been as clearly addressed. One component of moral motivation are the social norms of one's reference group.

Nancy Willard's research on cyberethics makes use of a similar model to Rest's. She has proposed examining the relationship of empathy to moral motivation, and applied Bandura's social learning theory to processes of disengagement, which

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may weaken moral character. (Willard, 1997; Willard, 2000). Results of her study are forthcoming and hold promise for understanding how teens make ethical decisions. (Willard, 2000).

Issue III: The Social Context of Behavior in Cyberspace

Efforts to study the social context of unethical cyber behavior are limited. Recent sociological work on the hacking community proves interesting. While headlines often portray the hacking community as a collection of "pathological" individuals, two studies address the complex social dimensions that define and negotiate the boundaries of acceptable behavior within this community (Himanen, 2001; Jordan and Taylor, 1998). The group ethos of this particular community dictates that hacking should not be used for theft or individual gain. In fact, these studies note that the hacking community has developed it's own set of standards to define "ethical" hacking. Jordan and Taylor note that this community ethos can distinguish between hackers and cybercriminals -- those who seek personal gain from their illicit actions. Himanen contends that hacking represents a change in approach to work. Hacking reflects "a general passionate relationship to work that is developing in the information age" and "...the hacker ethic is a new work ethic that challenges the attitude toward work that has held us in its thrall for so long." (Himanen, 2001:ix)

Purpose of the Study

The current study attempted to elicit information relevant to the issues described above. Specifically, the study was designed to assess students' and educators' intuitive understanding of ethics and ethical decision-making, their ability to apply that knowledge to cyber dilemmas, their understanding of how to teach and learn an ethical awareness, and their sensitivity to the social context of cyberethics issues.

Method

Focus Group Formation

Five focus groups were conducted using modified Socratic questioning (see below for a description of the procedure). Group 1 consisted of 5 post-secondary educators from Marymount University. Group 2 consisted of 5 K-12 educators from suburban Northern Virginia public schools. Groups 3-5 were drawn from counselors and campers at a summer computer camp in Washington D.C. Group 3 consisted of 15 late elementary and middle school students and Group 4 consisted of 16 high school students. The students in these groups came from a variety of neighborhoods around Washington D.C., however most were of higher socioeconomic status. Participants, who were mostly male, were attending the camp due to their interest in computer technology. Their computer expertise varied. Although this group is not representative of the population as a whole, their computer expertise and interest in cyberissues was desirable. This study was designed to define issues and gather information from those students most likely to be aware of situations which require cyberethical decision-making.. Group 5 consisted of 13 computer camp counselors. These participants were college students, most of whom had significant interest and expertise in computer technology. As with the younger groups, this groups expertise and interest level was significantly greater than the general population, but this was desirable in order to gather information from students on the "front lines". In addition, this group's experiences counseling younger children on their use of computers meant that they in some ways bridged the gap between educators and students. The focus groups were videotaped with the exception of Group 5, which was audio taped. The authors were present as observers for each group session.

Focus Group Procedures

For each group, objects related to computers and cyberethics issues were displayed on a table. These objects included items with an obvious connection to the issues discussed (e.g. a computer hard drive and an Acceptable Use Policy) as well as items that were more tangentially related e.g. plastic "bugs" and "worms". The group facilitator for all of the groups was an expert in Paideia methods of seminar discussion. The opening question invited the group to examine the items on the table and discuss their ideas with regard to these items. Follow-up questions were designed to encourage participants to elaborate on their own and each other's ideas. A final question was designed to relate the topics discussed to the participants' own experiences.

The focus group discussions were transcribed and analyzed thematically in order to determine issues of central importance to each group as well as to determine the similarities and differences in the issues raised by each group.

Results and Conclusions

Four major themes were identified across all of the focus groups studied. Each theme is identified and discussed below and illustrated with quotations from the focus group discussions.

Theme 1: The cyberethics "authority" recognized by students is much younger than the offline ethical authority.

When asked, "How do people learn ethics?" all groups recognized the importance of parents in shaping a child's basic understanding. Students explain: "I think people learn a lot of their ethics from their parents. Whether they get what their parents are teaching them or something else. But I think it's a lot from their parents or whoever raised them, and their parents give them a way to react to what others say so they can take it in think about it and what your primary values are probably shared with your parents." (High School) Teachers agreed: "Kids look to teachers, parents ...to set examples by how they behave... Over a period

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of time you develop a hierarchy of values. You can compare a given situation and place in context. (You) learn from parents, others important in life that you value their judgement. (You) have to value it before it makes a difference to you." (Educators)

However, as children get older, the relative importance of parents declines: "It changes at different times in their lifetime. Young kids are more likely to accept parents and not question. They question more as they are influenced by others and then they question anything parents say in adolescence." (Educators)

Teens acknowledge that teachers aren't always the ultimate authority: "If you think about it...., your teachers haven't gone through these troubles (referring to cyber dilemmas) for years and your just going through them right now and maybe things have changed from when they were kids so on some points I think your friends are wiser about what you're going through than your teachers are." "Friends might put you on the wrong track, (but) teachers might too. Society has changed a lot, on some points." (High School)

When asked "How did you learn right and wrong in cyberspace?" students responded: "I taught myself right and wrong, especially because on the computer I taught myself how to fix things and how to fix programs." (Elem/Middle)

In fact when it comes to the Internet, the ethical course of action is often defined by those between 19 and 25 years of age: "... the Internet culture is controlled, not by 50 year olds or 60-year olds, it's us. Our age. We talked about when you sort of lose your ethics when you go to college.... You're like, alright! Ethernet connection and you start downloading more MP3s than you would ever do, songs you hate, cause it was a fast connection. ...my parents don't really understand the Internet at all so they can't really make ethical judgements based on it. So the ethics come from 19-year old high school students, the ethics that we use on the Internet. We say everybody does it, well everybody on the Internet or most people are Internet are probably under 30. The majority of that (group) is probably under (the age of) 25." (College)

To summarize, students and teachers recognize the important role parents play in shaping children's basic understanding of ethics. Both groups agreed that as students get older, the importance of parents and adults declines. Teens acknowledge that teachers aren't always familiar with contemporary dilemmas resulting from new technologies. In fact, when it comes to the Internet, ethics are often defined by young adults ages 19 to 25.

Theme 2: Students of different ages use different mental frameworks to decide ethical online behavior.

Online communities, like AOL or GeoCities, provide definition to the social boundaries that middle school students acknowledge. "When I first signed on to AOL, there's like email that says 'Welcome'.... Then you check it and we printed and put it right in the center where everyone would see it so they would obey what AOL says. Like, don't hack, don't mess around with stuff. (The) long email says what you shouldn't do." (Elementary/Middle) "At GeoCities it didn't give me as long a set of rules, but the only reason you can get on there is to get a web site. So it has rules about what you make (for) your web site. When I started reading them, there are all the rules, pretty much the same: don't download things that are illegal things, don't download MP3s on your site." (Elementary/Middle)

High school students consider what is appropriate in terms of the "moral" or ethical impact their actions have on others and society at large. "I think it's appropriate to use (it) for school, but it's not right to send off a virus. You are destroying another person's property" "I had a romantic image of hackers like the movie Hackers for one, they bring down an evil corporation like the Westerns where the outlaw would kill the corrupt sheriff or something but a lot of times it's not like that at all because major corporations can lose billions of dollars and that can cause many repercussions like downsizing" (High School)

College age students often use a "legal" framework as their guide to "ethical" behavior. After extensive discussion about how to decide what's right in relation to the Internet, one college student reflected on the relationship between laws and ethics: "We keep talking about what is legal and illegal as our moral code. ...A lot of people go by The Ten Commandments and some of those things are law, official United States law.... But they are a kind of a code of ethics that we can go by and live by...." (College)

These students see the line of distinction between ethics and laws as a personal decision "You have to do it personally. You have to come to personal decisions...." "...the reason that we come to law is that ethics are personal, whereas laws are something that we share, that are attempting to sort of approximate the general ethics without imposing on ethical differences." (College)

Importantly, all age groups learn right and wrong in cyberspace from their hands-on experience. "People have to learn things from experience and I think that the only way of learning something no matter how much you believe them, you really need to learn for yourself." (High School) In fact, students suggest that ethics in general is learned through experience. "I don't believe that any form of ethics is learned directly... Ethics is learned indirectly from various sources." (High School)

To summarize, students of different ages use different mental frameworks to decide ethical online behavior. Middle school students use online communities, like AOL or GeoCities to define social boundaries. High school students consider what is appropriate in terms of the "moral" or ethical impact their actions have on others and society at large. College age students often use a "legal" framework as their guide to "ethical" behavior. For all age groups, right and wrong in cyberspace is learned from hands-on experience.

Theme 3: When considering "appropriate" and "inappropriate" behavior online, some issues are clear for both teachers and students, however many others are not.

Advances in technology create new challenges for ethical decision-making. While educators insist most cases are still a matter of "basic values," students at the college level suggest that cyberrules are different. Discussing intellectual property, educators explain: " You need to show (students)... they can achieve what they want in an honest way, these MP3s things are a good example, a lot of people understand why that might be wrong because they respect the artist. They don't (necessarily) see

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intellectual ideas as property the way music is the artists' property." For this educator, it's merely a matter of drawing parallels between intellectual property that students recognize and the new situations that emerge in cyberspace.

Younger students often express confusion over what's "legal," particularly when it comes to downloading music: "It depends, ...if you download live album tracks, that's illegal. But you can go to places like Listen.com and it's legal you can download it to a CD. Places have a license to have you copy it, that's what they are for." (Elementary/Middle) When referring to using graphics and music from an online web site, another high school student explains: " If the person tells you ok, the person with the Web page and MP3s, (says)... click here if you want it, (they are) giving (you) permission. As long as you have your friend's permission." (High School) "Like I was saying about plagiarism laws, it's really not illegal until you start trying to make money off somebody's idea. I have copied things on CD into MP3 files because of ease of access. I don't try to sell it or spread it around online so it's ok." (High School)

Educators are aware of the challenges posed by these new technologies, but maintain that our current standards offline apply in the online environment. " Technology has made it so much more complex. There's the issue of sampling in music, are you going to footnote? It's done by serious musicians, classical musicians. It's hard to know where to draw the lines. Or using Photoshop and making something new out of it. That's serious art. How do you acknowledge that? We're in difficult water here. It was pretty clear about footnotes and books, but it's harder with more arcane technology. There's proper research and I think it's important that educators and parents teach the proper way to do research. We (teachers) have to define material that is correct."

In spite of these new challenges, educators emphasize the need to use traditional techniques. "That takes us back to old fashioned sources of good documentation, good references, how to check out something that might be fraudulent. It's harder now because it's click, click, click away. We need to ground kids in book culture until we know how to find our way in the new culture."

College students clearly articulate some of the complexities involved. For example, they suggest that it is "harder to see a victim with any online crime. It all started with cassette tapes. ...I mean nobody in their right mind actually thought ...I'm doing this horrible thing when they ...copied cassette tapes. And then you got the Internet and all of a sudden instead of just.... copying cassette to cassette tape, you're copying CDs, you're copying books, you're copying art. Everything suddenly with the Internet went from a small issue to ...the point where you can copy entire movies, you can copy entire books in seconds. And I think our ethics weren't ready to expand. ...Anything I could copy in an hour wasn't that important." (College)

Students see the online environment as distinct from the offline world. They acknowledge that the way people interact with one another online adheres to different standards. "You act different when you're being ethical on the Internet, than when you are being ethical in real life." "I mean I'm not ON the Internet. There are parts of my life that I (am) showing through a website... ...you don't put forward your whole self. ...You're maybe an image of yourself, but not your real self. We can be more free with other people. We take advantage on the Internet." "I think basically what it is, is the Internet is just a lot less real to people than the real world. And that's why it's called cyberspace. It's not called the real world." "...people just don't think of the Internet as a real thing with real consequences." (College)

But more than just a place where inhibitions or even better judgement are left by the way side, students question the fundamental assumptions concerning what is right and wrong in cyberspace. When discussing intellectual property in the online environment, they explain: "it's like when you're a little kid you're told don't steal that book because it's his book. If you steal that book he can't use it. On the Internet, if you steal his book, he still has his copy of the book and now it's just you have a copy of the book too. ...the standard ethical rules you drive into little children just don't apply as much on the Internet as they do in the working order world that's out there in other places." (College) These same questions have been posed by philosophers at MIT (Ludlow, 1996).

To summarize, some issues are clear for both teachers and students. Other issues are not so clear when it comes to considering "appropriate" and "inappropriate" behavior online. Advances in technology create new challenges for ethical decision-making. While educators insist most cases are still a matter of "basic values," college students suggest that cyberrules are different.

Theme 4: Educators can encourage ethical behavior by recognizing the type of situations that make unethical behavior attractive and challenging students to channel their technological expertise in positive directions.

Educators are well aware that students have a great deal more technical knowledge than they do: "It will take all our brains and energy to keep up with them." But they are optimistic that most students want to do the right thing. They believe must establish clear examples of what's "right." "It's still a real minimal number compared to the whole. 98% do what's right 99% of the time. Kids who steal cars now and then. (The main) issue is being consistent and clear. This is appropriate and acceptable. It should not be a mystery. Let kids know. It really needs to be spelled out, taught, probably from kindergarten."

Students suggest that educators focus on the positive and keep the list short! "When you first sign up to AOL you get a 75 page email or so anyway, it's really long and you're supposed to read the whole thing long long thing (we were) so anyways if you read it there's 50 million rules and it's weird it's annoying also they never what they tell you what you can do, just what you can't do. It would be better if they sent the can dos and then you have a shorter list to read and you can picture the bad things." (Elementary/Middle)

Reinforcing ethical behavior requires educators to actively engage students in a dialogue. The younger generation learns by doing! "Past experience has a lot to do with it. Have to learn things the hard way, from experience. If people just tell you something you really have to see if for yourself." (High School) "You have to do it personally. You have to come to personal decisions or you can tell kids to do that themselves.... So I think that's one way that they interact." (College)

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Educators recognize some situations make unethical behavior attractive and emphasize the importance of carefully evaluating expectations. "I think the pressures on them – they talk about how they have to perform at such a level in 10 different activities and be able to sleep two hours a night and be the king and queen.... A lot of youngsters rationalize - 'I can get this done, I just need some help from cyberspace, a buddy, a friend, etc.' Either they don't see that or they do see and the pressure is so high. That's their way of meeting those demands placed on them. Especially in high school, starting in about 7th grade."

Still, there are those students who engage in unethical behavior just for the challenge. "It's a game to some people, you can't get caught, can't get killed, like a game or a test of their ability. "It's a challenge they need and the Pentagon is the ultimate challenge. Go to a more impenetrable challenge." "....For a lot they are kind of total losers in real life, (who) keep to themselves, (and have) no power.... ...in cyberspace I have power. What a power trip hacking into the Pentagon. Kids with no friends. "I beat the Pentagon hack protectors." " (High School)

Finally, it is important that educators provide opportunities that challenge those students with technological expertise. By channeling their expertise in a positive direction, teachers can provide students with opportunities to take ownership and act responsibly. "One of the problems at my school is vandalism. They were taking the balls out of the mice. It gets really old. The Lab was inoperable.... ...We talked to SGA (Student Government Association) to get the students involved... What are the consequences of this kind of vandalism? You're behind on your project because someone thinks it's funny, but you are burdened. Only faculty and staff were owning this problem. We asked them to help us deal with it. It's kind of like when I first started teaching. My father told me to find the biggest kid in the room and make him your friend. It was good advice. Find the smartest computer kid in the room, get help from them, help them resolve problems. ...Sometimes they do it for the challenge - that's a good value, looking to explore new territory. Adults have to channel that into something constructive. ...That talent should be directed somewhere where it doesn't destroy property.... ...Channeling it.... ...you (can) do a tech based project and have them help you teach the project. All of a sudden they have ownership and they aren't going to screw that up to lose the power or the satisfaction. They (the students) are teaching the teacher. (It's) called pride. You give them back to channel it. They were sitting there all day putting inappropriate pictures on the screen savers. Then you say can you put in some pictures of the Civil War, using the same skills. And citing, of course!" (Educators)

To summarize, educators can encourage ethical behavior by recognizing the type of situations that make unethical behavior attractive. In addition, it is important to provide opportunities that challenge students to channel their technological expertise in positive directions. Students who take ownership of their work are less likely to act in ways that are destructive to the online community.

Future Directions

At present, the most common response of educational institutions to the challenges of cyberethics has been to hand out an Acceptable Use Policy (AUP) and a set of plagiarism guidelines, require students and parents to sign it, and wait for the ball to drop. As this paper demonstrates, the questions these issues raise cannot be addressed by a single statement of principles, however well crafted. The answers are too varied and unclear for easy, unequivocal answers. No AUP can anticipate every possible problem that may arise. Instead of prescribing policy, students and educators need to establish an ongoing process of ethical discourse when dealing with cyberethics issues.

If we see cyberethics issues as more akin to other types of moral dilemmas, the research on moral education can provide us with some direction. Narvaez, Bebeau & Thoma (1999) noted that Rest's four stage model can be used to classify various approaches to moral edution in K-12 schools. According to their analysis, moral education in the public schools historically tends to reflect society's particular moral concerns which have ranged from the "macromorality" concerns of the 1960s (the Civil Rights movement, anti-war protests) to current pre-occupation with attempting to curb perceived youthful antisocial aggressiveness by emphasizing self control and "10 Commandment" type prescriptions for moral behavior. Using the four component framework, this reflects a shift in emphasis from moral judgment to moral character. The effectiveness of current "character education" approaches has not yet been established (Leming, 1997 in Rest, et. al., 1999). It would seem logical that approaches that address multiple components of moral behavior should be more effective than those that address only one component. Thus, any approach to cyberethics education should address issues of moral judgment, moral character, moral motivation and moral sensitivity.

Insights from brain-based learning research (Caine and Caine, 1991) also can guide cyberethics education. This research indicates that students must connect what they are trying to learn with what they already know to retain the knowledge. Traditional presentations of instructional material organize that material into the educator's categories of knowledge. With a subject like cyberethics, this traditional approach is particularly unlikely to yield effective results since the student's categories of knowledge may differ quite significantly from those of the teacher.

Educators and students need to engage in dialogue that can help both groups question their decisions concerning the use of ethical standards. In this process it is important to recognize that everyone will not come up with the same answer or agree on a single "ethical" course of action. All can agree that decisions should be based on sound reasoning and ethical principles.

Where ethical standards can be applied, we need to document the harm of ignoring an ethical course of action. This can help students develop moral sensitivity and enhance moral motivation as they see the consequences of their behavior on what are usually perceived as "invisible" victims.

All of us --students and teachers together-- must actively question the changing boundaries that result from technology transfer. These questions cross many disciplines in the humanities and social sciences:

- How do students of different ages, developmental stages, and cultures grapple with "ethical" in the online environment?
- How are social boundaries changing and thus defining what is appropriate and inappropriate online?

- What social forces shape these definitions?
- How do economic and political pressures influence our judgments and behavior?

Using the interactive nature of the Internet itself may prove to be a very effective means of facilitating this kind of ethical discourse about online behaviors. The linear features of online technology allow students to select multiple paths through new material rather than one set, prescribed course of study. Digital "scaffolding" techniques can assist students as they apply abstract concepts to contemporary issues. Scaffolding refers to the guidance students are given while completing a complex task like ethical decision-making. Students are given only the amount of help that is needed, as that help is needed. The teacher gradually withdraws assistance, allowing the student to complete the task independently. Scaffolding is designed to support students through more complex tasks with the amount of support they need, and no more (Jonassen, Peck and Wilson, 1999). Using these techniques to engage students in brain-friendly ways, and addressing all aspects of the four-stage model described above should yield a rich, comprehensive approach to exploring cyberethics issues and developing students' moral sensitivity, judgment and decision-making capabilities.

The stakes involved in becoming a more ethical society online are not trivial. With our increasing dependence on computer technology for tasks as significant as maintaining medical records, controlling air traffic, ensuring national security, and conducting businesses large and small, the unethical actions of a few have the potential to impact society on a massive scale. Helping our students acquire the awareness, the motivation and the means to become ethical decision makers in cyberspace is critical in order to prevent such impacts from occurring.

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